

CLAIMS

What we claim is:

1. An aqueous, energy curable, homogenous, composition comprising the neutralization product of
 - (a) an ethylenically unsaturated acidic resin containing carboxylic acid, acrylic functional groups, methacrylic functional groups or a combination thereof, and
 - (b) an ammonia, amine, alkali metal hydroxide or a combination thereof; in
 - (c) water;where upon curing with an actinic radiation source, a stereo-crosslinked ionomer forms offering the composition an increased cross-linked density.
2. The composition of Claim 1 wherein the, ethylenically unsaturated resin is a styrene/maleic anhydride copolymer, partially esterified with a hydroxy alkyl acrylate or methacrylate functional group.
3. The composition of Claim 2 wherein the partially esterified styrene/maleic anhydride copolymer is further esterified with an alcohol group.
4. The composition of Claim 1 wherein the neutralizing agent is ammonia, ethylenically unsaturated amine, or a combination thereof.
5. The composition of Claim 4 wherein the neutralizing agent is ammonia, ethylenically unsaturated tertiary amine, or a combination thereof
6. The composition according to Claim 1, wherein the ethylenically unsaturated resin has an acid number of at least 80 and a weight average molecular weight between 1,000 and 50,000.

7. The composition according to Claim 6, wherein the ethylenically unsaturated resin has an acid number of at least 80 and a weight average molecular weight between 1,000 and 25,000.
8. The composition according to Claim 7, wherein the ethylenically unsaturated resin has an acid number of at least 80 and a weight average molecular weight between 1,000 and 10,000.
9. An aqueous, energy curable, homogenous, composition comprising:
the neutralization product of
 - (d) an ethylenically unsaturated basic resin containing amine, acrylic functional groups, methacrylic functional groups or a combination thereof and
 - (e) an acid; in
 - (f) water,where upon curing with an actinic radiation source, a stereo-crosslinked ionomer forms offering the composition an increased cross-linked density.
10. An aqueous, energy curable, homogenous, composition comprising:
the neutralization product of
 - (a) an ethylenically unsaturated styrene/maleic anhydride copolymer acidic resin, partially esterified with a hydroxy alkyl acrylate, further esterified by an alcohol, containing carboxylic acidic functional groups; and
 - (b) an ammonia, ethylenically unsaturated tertiary amine, or a combination thereof; in
 - (c) water,

where upon curing with an actinic radiation source, a stereo-crosslinked ionomer forms offering the composition an increased cross-linked density.

11. A method for preparing an energy curable coating comprising employing the composition of Claim 1.
12. A method for preparing an energy curable coating comprising employing the composition of Claim 9.
13. A method for preparing an energy curable coating comprising employing the composition of Claim 10.
14. An energy curable coating comprising the composition of Claim 1.
15. An energy curable coating comprising the composition of Claim 9.
16. An energy curable coating comprising the composition of Claim 10.